Federal law differ from those here spoken of in their organization. In Bâle Campagne with its 37,000 acres of forest, 75 per cent. of this being public, has no officials whatever. Laws have been passed, but the people set them at naught; and similarly in Thurgovie there is the greatest opposition to any interference with what the people consider to be their ancient rights; and here also there are no officials, except one who has the care of 300 acres of State forest.

The salaries of the forest officials vary very much in the different cantons, but even in the best-paid districts the remuneration is very modest. Under-foresters receive sometimes a fixed salary, sometimes only daily wages when employed. If the former, the sum varies from £24 to £48; occasionally it reaches £60. If the rate of pay is per day, which is unusual, it is generally fixed at 4*s.* District foresters usually receive from £88 to £112 a year. In Uri, however, £120 is given, and in Glarus and a few other places as high as £160 per annum. Cantonal forest inspectors receive from £120 to £180 a year, besides allowances, which are always given to the higher officials when travelling on duty, ranging from 5*s.* to 8*s.*, with the cost of the journey.

NOTES.

WE regret to announce the death of Signor Giacomo di Brazza, brother of the Governor of the French Congo Settlements, also an African traveller well known by his investigation of the Ogowé River. He died at Rome, aged thirty.

HERR ANDOR SEMSEY has presented the sum of 8000 florins (£800) to the Natural Science Society of Budapest, for the printing of a work by Herr Otto Hermann on Hungarian birds.

THE International Congress of Americanists, which met in 1886 at Turin, proposes holding its seventh session at Berlin early in the month of October. The Organizing Committee already includes such well-known names as Virchow, Reiss, and others.

MR. A. W. PICKARD-CAMBRIDGE has taken first place in Classics among the senior students at the last Cambridge Local Examination, and has been offered, in consequence, an Exhibition at St. John's College, Cambridge. He has won this honour at an almost unprecedentedly early age, being only fourteen years old. He has been a pupil of Weymouth College for the past four years, and is the son of the Rev. O. Pickard-Cambridge, F.R.S., the well-known naturalist.

A REPORT of the Cambridge Local Examinations and Lectures Syndicate laying down a scheme for the examinations for commercial certificates has been confirmed by grace of the Senate. The examination is to be wholly separate from the local examinations, there being no papers of questions common to the two, and no common classification of successful students. The standard set by the Syndicate is that suitable for well-prepared students of seventeen. Amongst the compulsory subjects are arithmetic, and physical and commercial geography, whilst the optional subjects include algebra and one of the following five subjects in elementary science: (1) inorganic chemistry, theoretical and practical; (2) organic chemistry, theoretical and practical; (3) mechanics, including hydrostatics and pneumatics; (4) sound, light, and heat; (5) electricity and magnetism.

ACCORDING to the *Oldham Evening Express* of March 16, what is described as a full-grown summer butterfly took refuge from a blinding snowstorm in a dwelling-house at Lusley Brook, near that town. The wings are said to be beautifully variegated; and on obtaining shelter in a warm room the butterfly thoroughly revived.

AT the last meeting of the Calcutta Microscopical Society a paper was read by Mr. Simmons on the mango weevil, a pest which is spreading rapidly in India. He has devoted much attention to the weevil, and in this paper he gives much useful information as to its geographical distribution, the extent of the damage done by it, with the observations of English and American entomologists on its ravages among fruit. This lecture is believed to be the first attempt made in India to systematically study the habits of the weevil.

THE Fund which has been established by Mrs. Elizabeth Thompson, of Stamford, Connecticut, "for the advancement and prosecution of scientific research in its broadest sense," now amounts to $25,000. As accumulated income is again available, the Trustees desire to receive applications for appropriations in aid of scientific work. This endowment is not for the benefit of any one department of science, but it is the intention of the Trustees to give the preference to those investigations *which cannot otherwise be provided for*, which have for their object the advancement of human knowledge or the benefit of mankind in general, rather than to researches directed to the solution of questions of merely local importance. Applications for assistance from this Fund, in order to receive consideration, must be accompanied by full information, especially in regard to the following points:—(1) Precise amount required. Applicants are reminded that one dollar is approximately equivalent to four English shillings, four German marks, five French francs, or five Italian lire. (2) Exact nature of the investigation proposed. (3) Conditions under which the research is to be prosecuted. (4) Manner in which the appropriation asked for is to be expended. All applications should be forwarded to the Secretary of the Board of Trustees, Dr. C. S. Minot, Harvard Medical School, Boston, Mass , U.S.A. It is intended to make new grants at the end of 1888. The Trustees are disinclined, for the present, to make any grant exceeding $500.

THE following is a list of the grants already made from the "Elizabeth Thompson Science Fund":—(1) $200 to the New England Meteorological Society, for the investigation of cyclonic movements in New England. (2) $150 to Mr. Samuel Rideal, of University College, London, England, for investigations on the absorption of heat by odorous gases. (3) $75 to Mr. H. M. Howe, of Boston, Mass., for the investigation of fusible slags of copper and lead smelting. (4) $500 to Prof. J. Rosenthal, of Erlangen, Germany, for investigations on animal heat in health and disease. (5) $50 to Mr. Joseph Jastrow, of the Johns Hopkins University, Baltimore, Md., for investigations on the laws of psycho-physics. (6) $200 to the Natural History Society of Montreal, for the investigation of underground temperatures. (7) $210 to Messrs. T. Elster and H. Geitel, of Wolfenbüttel, Germany, for researches on the electrization of gases by glowing bodies. (8) $500 to Prof. E. D. Cope, of Philadelphia, Penn., to assist in the preparation of his monograph on American fossil vertebrates. (9) $250 to Mr. W. H. Perkin, Jun., for experiments on the synthesis of uric acid. (10) $125 to Mr. Edw. E. Prince, of St. Andrews, Scotland, for researches on the development and morphology of the limbs of Teleosts. (11) $250 to Mr. Herbert Tomlinson, of University College, London, England, for researches on the effects of stress and strain on the physical properties of matter. (12) $200 to Prof. Luigi Palmieri, of Naples, Italy, for the construction of an apparatus to be used in researches on atmospheric electricity. (13) $200 to Mr. Wm. H. Edwards, of Coalburg, W. Va., to assist the publication of his work on the butterflies of North America.

THE latest reports received by the Hydrographic Office of the United States about the logs of the great raft abandoned south of Nantucket about three months ago, prove that, though they are now widely separated, their general drift has been in an east-south-east direction, the logs being found a little to the southward of this line. That they were not carried more to the northward and eastward by the Gulf Stream, as would be expected, was probably due to the strong north-west winds which prevailed during the latter part of December and the first part of January. Fortunately, no vessel has been disabled by collision with them, although the German bark *Bremen*, which was in company with the logs for five days, in latitude 39° north, longitude 62° west, had her sheathing torn and rudder injured.

WE have received from Mr. R. T. Rohde, of the New Oriental Bank, a well-known authority on questions connected with currency and banking, a pamphlet entitled "A Practicable Decimal System for Great Britain and her Colonies." In criticizing the Report on Decimal Coinage of the Parliamentary Committee of 1853, he proposes, amongst other things, to preserve the sovereign as the standard unit of the country, but to call it five dollars British sterling, each dollar being divisible into 100 cents, a cent thus being nearly one halfpenny in value; the sovereign and half-sovereign to remain, as before, the only gold coins in the country, the latter to be legal tender for an amount not exceeding £5, and the former for any amount. In the silver and copper coinage he would not make any alteration. He also advises the allowing of the use of the cental of 100 avoirdupois pounds, divisible into any decimal subdivision of such pound avoirdupois; the using of the foot as the standard measure, such foot being divisible into 100 equal parts, ten of which make one decimal inch. As a measure of capacity, he would suggest a vessel equal to one-tenth of an Imperial gallon, such vessel to contain one pound avoirdupois of distilled water at a temperature of 60° F.

AN interesting experiment in the planting of waste saline tracts in India has been carried out by Mr. Maries, superintendent of the gardens of the Maharajah of Durbhunga. The results have been communicated to the Agricultural Department, Bengal, and are contained in the last report of the Director. Mr. Maries says that six years ago, when he went to Durbhunga, he did not know what to do with patches of saline soil, on some of which not even weeds would grow. He dug the soil to the depth of two feet, and planted it thickly at the commencement of the rainy season with trees which had been grown in pots till they were about three feet high. In three years the ground was filled with roots, and to all appearances the salt had gone. When the trees were thinned out last year, leaving only the best, the ground was found to be in good condition. Similar experiments have been carried out in other places, and now Mr. Maries has splendid plantains growing on soil which a few years ago would not even grow a weed. He employed various kinds of trees in his reclaiming operations, but he says that the best were the *Inga Saman*, or rain trees, and the *Albizzia Procera*. The former is valuable as producing an enormous quantity of surface-feeding roots, and these decaying yearly leave a rich vegetable deposit on the soil. The trees soon completely change the character of the soil. The timber is excellent for fuel, and the trees bear lopping well. It is such an enormous water absorber that it would most probably be very useful in swampy places as a fever preventive, like the willow which is planted in China around the villages in the rice districts.

M. LÉOTARD, Secretary to the Scientific Society of Marseilles, describes, in a recent issue of *La Nature*, the appearance of certain peaks of the Pyrenees as seen from Marseilles and its neighbourhood. Every year, about February 18 and October 31, Mount Carrigou, situated in the Eastern Pyrenees, and 2765 metres above the level of the sea, may be distinguished from Notre-Dame de la Garde in Marseilles, projected on the disk of the sun as the latter is about to set. From the top of Marseille-Veyre, 8 kilometres south of the town, the same observations may be made about February 13 and October 28. A straight line drawn from Notre-Dame de la Garde to the summit of Carrigou is 253 kilometres. Both Carrigou and the peak of Treize-Vents have been seen frequently since 1808, and this year M. Léotard and some of his colleagues made observations on the subject, and secured illustrations.

REFERRING to a journey of exploration in Australia which M. Ernest Favenc proposes to take, the *Colonies and India* says that no group of colonies in the world have taken more interest in exploration than those in Australia. In Melbourne especially, scientific Societies have given attention to this subject. It appears that the design in respect to a trip which M. Ernest Favenc proposed to take has now assumed a definite shape, and that he will pursue his object if only the Victoria and New South Wales branches of the Royal Geographical Society of Australasia will subscribe the necessary funds to send a surveyor with him. His intention is to start for Western Australia, there to inspect a large area of unstocked country, and subsequently to undertake a trip into the unexplored region between the tracks of Forrest and Warburton. If he finds the season favourable, then he proposes to make south, cutting the tracks of the other explorers at right angles. It should be mentioned that the explorer makes it a condition that the surveyor shall also be a fair mineralogist and know something of botany. Horses, saddlery, and rations will be found by the leader, but the passage, instruments, and salary of the surveyor selected are to be provided by the Societies named. When the matter came before the Victorian branch, at a meeting of the Council, a sub-committee was appointed to deal with the applications for the post of surveyor, which, it is believed, will be numerous.

THE storm which was experienced on the Atlantic coast of the United States on the 11th and 12th inst. was apparently due to a disturbance which was situated over Georgia on the 10th, and which subsequently moved rapidly up the American coast. The storm apparently commenced with a warm southerly wind and heavy rain, which changed very suddenly to a north-westerly gale and violent snowstorm. The character of the storm was that common to the blizzard of the United States, and the intense cold of the north-westerly wind was evidently due to the rear of the disturbance stretching for a long distance over the cold continent of America. The loss occasioned by the storm, both to life and property, is immense.

THE Italian Meteorological Office has issued a report on the climate of Massowah, based upon the observations made with standard instruments by the officers of the Italian expedition, between May 1885 and September 1887. The discussion is divided into two periods (1) May 1885 to May 1886; and (2) June 1886 to September 1887. The results show that the mean monthly temperature is above 86° in the months May to October. The maximum occurs in August: 108° in 1886, and 101°·8 in 1887. The minimum occurs in February; in two ten-day periods the thermometer fell to 66°, but there is little difference between January and February. Rainfall is very scarce and erratic, the fall of a few days may exceed that of the rest of the year. In the first twelve months 4·1 inches fell on thirty-four days; in the second, 4·3 inches on twenty-six days. The prevalent winds are northerly and southerly. The latter predominated from June 1885 until the end of the year; from January 1886 until September 1887, northerly winds prevailed. The above temperatures, while showing that Massowah is very hot, are lower than those sometimes quoted, apparently owing to more careful exposure in the present investigation.

The New York Academy of Sciences (says *Science*) was organized in 1817 as the Lyceum of Natural History. It is fourth in point of age among American scientific Societies. The name and constitution were changed in 1876. The Annals, begun in 1824, have been distributed in all lands, and have given world-wide reputation to the Society. The Transactions, begun in 1881, give a record of the meetings, papers, and discussions, are published in monthly or bi-monthly numbers, and make an octavo volume each year. The library now numbers over eight thousand titles, and is especially rich in sets of the publications of foreign Societies. It is now on deposit in the Library Building of Columbia College, and is accessible to the public from 8 a.m. to 10 p.m. every day of the year except Sundays. The cabinet was destroyed by fire in 1866. Previous to that date it was the principal collection in the city, and did a noble work. The Academy has long looked forward to the time when it could secure a building of its own, such as the corresponding Societies in Boston and Philadelphia have long enjoyed. It is not to the credit of New York that its oldest scientific organization, after nearly three-quarters of a century of steady and persevering activity, should be still unprovided with a building, while many other cities can show noble monuments of scientific interest and public spirit. Why should not the recent meeting of the American Association in this city be permanently commemorated by the erection of a fire-proof building for the accommodation of the Academy, or perhaps of several other Societies under the same roof—a building which should be at once a benefit and an honour to the metropolis of America? The interest of the community has been aroused and quickened in the direction of science by the meeting of the Association, and the Academy of Sciences would now invite the citizens of New York to take a greater interest in its work.

Pure trichloride of nitrogen has at last been prepared and successfully analyzed by Dr. Gattermann, of Göttingen. The first result of these researches upon this terribly explosive substance brought to light the fact that the chloride of nitrogen prepared as usual by the action of chlorine gas upon ammonium chloride is by no means a homogeneous substance, that it really consists of a varying mixture of several chlorides. Moreover, it was found that the longer the time during which the chlorine was allowed to act, the more nearly the composition of the product approached NCl_3; but pure NCl_3 can never be obtained in this way, owing to the excess of ammonium chloride always present. Dr. Gattermann, however, prepared a quantity of this crude product, as richly chlorinated as possible, washed it well with water until all the sal-ammoniac was removed, drained it as free as might be from the water, and then led over it a rapid stream of chlorine. The resulting oil was again washed, carefully dried, happily without accident, and finally analyzed. The percentage of chlorine found was almost identical (89·17) with that required for NCl_3 (89·10). The success of these dangerous operations is all owing, it appears, to the fact that they were performed upon dull wintry days, when the sun's actinism was very low; indeed, Dr. Gattermann was almost led to believe that the disasters which have imparted to the history of this compound so tragical a character must have been owing to some fault of the experimenters. But at last—it was about the thirtieth preparation—the oil quietly reposing in the chlorinating apparatus suddenly exploded with its usual detonation. At the same moment Dr. Gattermann noticed that the sun had broken through the clouds, and was shining upon his apparatus. Here then was the cause of these apparently spontaneous explosions: chloride of nitrogen is violently dissociated by the wave-motion of light. Following this up, it was found that the burning of a piece of magnesium ribbon in proximity to the oil was quite as effective in producing an explosion. Finally, Dr. Gattermann has determined the temperature of dissociation of the compound. About half a gramme was heated in a thin-walled tube placed in a beaker of liquid vaseline, the thermometer being read off by means of a telescope placed at a safe distance. As high as 90° C. the oil remained unchanged, but at 95° it exploded with such violence that the whole apparatus was destroyed. One feels much regret on reading Dr. Gattermann's concluding observations, in which he states that his eyes and nerves have been so much affected that he is obliged temporarily to give up all further work upon this interesting substance.

Messrs. Crosby Lockwood and Son are about to publish the following books:—"Waterworks: being Notes on the Storage of Water in Reservoirs, &c.," by Charles Slagg; "Practical Surveying: a Text-book for Students preparing for Examinations or the Colonies," by George W. Usill; "Granites and our Granite Industries," with numerous illustrations, by G. F. Harris; a treatise on "Asbestos, and the Asbestos Mines of Canada," by Robert H. Jones; "The Mechanic's Workshop Handy-book," by P. N. Hasluck; and the fourth edition of "A Treatise on Metalliferous Minerals and Mining," by D. C. Davies.

In a recently-published Report on the Fisheries of New South Wales, Mr. Griffin, the American Consul at Sydney, refers to the great wealth of the colony in this respect, which is totally neglected. Up to the present, no attempt has been made to develop an export trade in fish. In fact, there are only eleven hands employed in the whole colony in fish-curing, with a capital of no more than £250, and the output does not annually exceed £200 in value. Yet the amount of tinned fish imported by the colony last year exceeded 2000 tons, of which about one-half was from the United States, and almost all the remainder from Great Britain. With regard to the species of fish suitable for preserving which are to be found in the waters of the colony, the mullet (*Mugil grandis*) is there in abundance, and when well cured is superior to anything of the kind in the world. Generally, it may be said that the fish fauna of Australia differs very little from similar species in Europe and America. The most remarkable fish in Australia is the *Phyllopteryx*, described as "the ghost of a sea-horse with its winding sheet all in ribbons about it; and even as a ghost it seems to be in the last stage of emaciation, literally all skin and grief."

The resistance of pollen to various external influences is the subject of a recent inaugural dissertation by Herr Rittinghaus in Bonn (*Naturf.*, 1, 1888). As to temperature, he found most pollen able to bear 90° C. half an hour, without losing the power of germination. A temperature-maximum was reached at 104°·5 for ten minutes. In conditions favouring germination, pollen does not bear such high temperatures as in the air-dry state. A moderately raised temperature (32°) accelerates growth of the pollen tubes. Low temperatures (*e.g.* under 9°) prevent germination, though a cooling to 20° for forty minutes can be borne without injury. As to *liquid* chemical reagents, the plasma of pollen proved very sensitive to antiseptics (more so, as a rule, than micro-organisms), but the resisting power is pretty different in different sorts of pollen. Chloroform *vapour* acting for twenty minutes was fatal, bromine vapour in five minutes, ammoniacal vapour in ten to twenty minutes. Rotation, several hours, of a spherical vessel holding pollen with nutritive solution, did not prevent free germination. The retention of the power varies widely in different plants. Thus, *Cyclamen* lost it soonest, in seventeen days; while *Clivia*, a narcissus, still had it on the sixty-sixth day (*Pæonia* fifty-eight, *Camellia* fifty-one, *Azalea* forty-two). The average is thirty to forty days.

A recent number of the *Indian Agriculturist* contains a notice of a little book written in Bengalee, by a Hindoo gentleman, Nidhiram Mookerjee, and published at the Bangabasi Press, Calcutta. The work is on pisciculture, and gives us the results of the labours of an ardent student of fish and their habits. He established a fish-farm on his own estate, and watched over it for many years. He divides his subject into five parts. In the first place, he discusses the fish supply of Bengal, and in doing so shows that the supply is frequently not equal to the demand—a fact due chiefly to the absence of skilled fishermen. And so it happens that at various seasons breeding and unmatured fish are brought to market to meet the demand. The second chapter treats of the best food for fish; the third of hatching and breeding, and the proper precautions to be taken at those times. The fourth part deals with the question from a commercial and speculative point of view. A little capital, the author says, if wisely invested in pisciculture and in fisheries produces a greater return than in any other industry; for while, as Prof. Huxley says, an acre of land will produce in the year a ton of grain or two or three hundredweight of meat, the same extent of water in a good fishing-ground will yield a greater weight of fish in a week. The author begs of his countrymen to pay attention to this much neglected subject; he puts his practical experience before them, and thinks, that in a country like Bengal, where fish forms a large portion of the dietary of the people, it is a pity that more is not known of this subject. One of the most valuable portions of this little work is the fifth, in which he gives a scientific description and classification of almost all the known fish in the waters of Bengal, with their Bengalee equivalents.

THE additions to the Zoological Society's Gardens during the past week include two Stock-Doves (*Columba œnas*), British, presented by Lieut.-Colonel W. G. Dawkins; a Gayal (*Bibos frontalis*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

DISTRIBUTION OF THE SUNSPOTS OF 1886 AND 1887.—Prof. Spoerer points out in a short note in the *Astronomische Nachrichten*, No. 2828, that the predominance of the southern hemisphere over the northern as to the numbers and areas of sunspots which they have displayed has continued throughout the two years just past. It would seem, indeed, as if the maximum for the southern hemisphere had fallen later than for the northern, for after the last return of the great group of November 12–25, 1882, the latter hemisphere became comparatively quiescent for a considerable time, and from that date the predominance of the southern hemisphere has been almost uninterrupted, the displays it exhibited during the latter part of 1883 and the earlier months of 1884 being so considerable and so numerous as to make the date of maximum the same for the sun as a whole as for the southern zone. So in the decline since the maximum, not only has the mean spotted area of the northern hemisphere been scarcely more than half that of the southern, but the running down in latitude has been more marked in the former than the latter. Thus in 1884, the northern zones above lat. 25° were already free from spots, whilst in the south the zone 25° to 30° was still occupied. In 1886 spots had ceased to be seen in the zones north of N. lat. 20°, but were still seen in the corresponding southern belt; whilst in 1887 they had almost vanished from the zone N. lat. 15° to 20°, though still fairly numerous at a like distance from the equator on the other side. The actual distribution of the spots is shown by Prof. Spoerer in the following table:—

Year.	+20° +15°	+15° +10°	+10° +5°	+5° 0°	0° −5°	−5° −10°	−10° −15°	−15° −20°	−20° −25°	Totals. N.	Totals. S.
1886	17	30	40	14	50	45	68	47	5	101	215
1887	2	22	15	14	19	56	27	14		53	116

THE TOTAL ECLIPSE OF THE MOON, JANUARY 28.—By the kindness of Dr. E. Lindemann we are enabled to give the following further list of occultations observed during the total eclipse of the moon on January 28:—Amherst, U.S., 7; Clinton, U.S., 3; Copenhagen, 25; Harvard College, U.S., 23; Madrid, 20; Montreal, 6; Moscow, 15; Nice, 24; Princeton, U.S., 8; Toulouse, 13; Utrecht, 15; Washington, 11; West Point, U.S., 2. The weather was also favourable at the Birkdale Observatory, Southport, and at Berlin and Dun Echt; but at the last two Observatories, and also at Lord Rosse's, the occultations were not observed. The sky was cloudy at Herény, O'Gyalla, Quebec, Rió Janeiro, Stockholm, and Vienna.

SPECTROSCOPIC DETERMINATION OF THE ROTATION PERIOD OF THE SUN.—Mr. Henry Crew, Assistant in Physics at the Johns Hopkins University, has recently published (*American Journal of Science*, February 1888) a series of observations made with a fine Rowland grating of 14,436 lines to the inch, of the relative displacement of certain lines in the solar spectrum, as given by the opposite limbs, with a view to determine the rotation period of the sun. The result which he obtained from 455 settings in the course of observations ranging over four months and a half, gives, for the mean equatorial velocity, $v' - v'' = 2{\cdot}437 \pm {\cdot}024$ miles per second, corresponding to a true period of 25·88 days. But an unexpected and remarkable circumstance was brought out by the investigation, in that the observations seemed to show a gradual *increase* of daily angular motion with higher heliographical latitude, whilst, as is well known, Carrington found a *decrease* of such motion for the spots. Mr. Crew gives for the equation of this change—

$$v = 1{\cdot}158 \cos \chi^\circ \,(1 + 0{\cdot}00335\, \chi^\circ),$$

whence we have for the daily angular motion of any point in the reversing layer—

$$\theta = 794' \,(1 + 0{\cdot}00335\, \chi^\circ),$$

whilst Carrington obtained for the sunspots—

$$\theta = 865' \,(1 - 0{\cdot}191 \sin \tfrac{7}{4}\chi^\circ).$$

The greatest irregularities in the value of $v' - v''$ occurred between the latitudes 15° and 25°, *i.e.* in the chief spot zone.

It should be added that different lines gave different values of $v' - v''$, with nearly as large a range as the different latitudes did, but there appeared to be no connection between the order of the velocities and the order in which the elements causing the lines observed are generally supposed to be distributed in the solar atmosphere. The double line, 1474 K, of which one component is due to iron, and the other is the line of the corona, gave no evidence of variation in width on one limb, as compared with the other, so if the two lines be produced by absorption from different layers, those layers cannot be drifting with respect to each other at a higher rate than one-third of a mile per second.

The spectrum of the fourth order was used throughout. Attempts were made to measure the relative displacement of the D_3 line, as given by opposite limbs, but with this dispersion the definition was not sufficiently good to permit satisfactory measures of the line to be made.

NEW MINOR PLANET.—A new minor planet, No. 273, was discovered on March 8, by Herr Palisa at Vienna. This is Herr Palisa's sixty-first discovery.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1888 *MARCH* 25–31.

(**FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.**)

At Greenwich on March 25

Sun rises, 5h. 51m.; souths, 12h. 5m. 54·3s.; sets, 18h. 20m.: right asc. on meridian, 0h. 19·4m.; decl. 2° 6′ N. Sidereal Time at Sunset, 6h. 34m.

Moon (Full, March 27, 22h.) rises, 15h. 12m.; souths, 22h. 28m.; sets, 5h. 29m.*: right asc. on meridian, 10h. 43·4m.; decl. 10° 51′ N.

Planet.	Rises. h. m.	Souths. h. m.	Sets. h. m.	Right asc. and declination on meridian. h. m.	Right asc. and declination on meridian. ° ′
Mercury..	5 10 ...	10 27 ..	15 44 ...	22 40·8 ...	9 9 S.
Venus ...	5 10 ...	10 23 ...	15 36 ...	22 36·7 ...	9 59 S.
Mars ...	20 12*...	1 34 ...	6 56 ...	13 46·0 ...	8 10 S.
Jupiter ...	23 54*...	4 6 ...	8 18 ...	16 18·6 ...	20 25 S.
Saturn ...	11 54 ...	19 53 ...	3 52*...	8 7·6 ...	20 48 N.
Uranus...	19 12*...	0 47 ...	6 22 ...	12 58·8 ...	5 32 S.
Neptune..	7 49 ...	15 30 ...	23 11 ...	3 44·1 ...	18 6 N.

*** Indicates that the rising is that of the preceding evening and the setting that of the following morning.**

Occultations of Stars by the Moon (visible at Greenwich).

March.	Star.	Mag.	Disap. h. m.	Reap. h. m.	Corresponding angles from vertex to right for inverted image. ° °
28 ...	80 Virginis	... 6 ...	19 49 ...	20 43 ...	10 230
31 ...	η Libræ ...	... 6 ...	1 20 ...	2 30 ...	61 234